

Hunters Point Naval Shipyard (HPNS) Radiological Data Evaluation



COMMUNITY OUTREACH

How do I get on/off the email or mailing list?

You can be added or deleted from the email or mailing list by sending an email to info@sfhpns.com or by leaving a message on the HPNS Info Line at (415) 295-4742. You can also add your contact information to a sign-in sheet at a Navy meeting, a community event with a Navy informational table, or during an HPNS Bus Tour.

Why are there no uniformed Navy personnel at these meetings?

Hunters Point is no longer an operational Naval facility; therefore, no uniformed personnel are on the base. The base remains US Navy property until cleanup is complete and it is transferred to the City of San Francisco for redevelopment.

How will the Navy address public comments?

Questions received by members of the public and Navy responses may be included in future fact sheets or Frequently Asked Questions (FAQs). Public comments during formal public comment periods will be published on the Navy's website and included in final versions of the document commented upon.

Will the Navy regularly attend my group's public town half meetings?

The Navy offers multiple outreach opportunities throughout the year to share information with the public via site tours, public meetings and the Navy website. You are always welcome to participate. The Navy also attends community meetings and provides information specific to stakeholders' concerns in a mutually respectful setting.

Why won't the Navy host a town-hall meeting so others can hear what I have to say?

The Navy has found that the most productive forum for sharing information with the public is through an Open House style meeting wherein experts are available to respond at each poster board station to individual questions. This format allows us to answer more questions in a shorter period of time and accommodates stakeholders' schedules.

How is the Navy involving community members who live near the Shipyard in the cleanup?

The Navy leads the community involvement process at HPNS that includes a robust outreach program, including electronic communications, postings in local news media and blogs, and outreach to community leaders and community based organizations.

Navy community meetings offer information on cleanup progress and specific cleanup technologies, providing an opportunity for community members to learn about the cleanup and ask questions.

Technical documents are available for review by members of the public at local information repositories and on the Navy's website.

The Navy hosts several guided bus tours of the cleanup sites at HPNS each year, gives presentations to community groups, and hosts informational tables at local community events.

The Navy has hired a local community liaison and a community technical advisor to provide additional resources for community members during the radiological data evaluation.

Regulatory Agencies participate in Navy community engagement events, take part in meetings hosted by local organizations, and respond to inquiries from the general public.

Will the Navy restore the Restoration Advisory Board?

The HPNS Restoration Advisory Board (RAB) was formed in 1994 and dissolved in 2009 when it was no longer fulfilling its purpose or mission. Besides distributing information via emails, mailers, bus tours, and newspaper ads, the Navy conducts at least three (3) public meetings each year to provide information to the public in lieu of a RAB. If you are interested in knowing more, please sign up to be included on an HPNS distribution list by sending an email to info@sfhps.com, leave a message on the HPNS Info Line at (415) 295-4742, or provide your information on a sign-up form at an event where the Navy hosts an informational booth. You may also view program information on the Navy's website at www.bracpmo.navy.mil/hpns.

Where can I get more information on the Navy's cleanup at HPNS? See page 2

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Reference fact sheets may be found on the Navy's website at www.bracpmo.navy.mil/hpnsrc



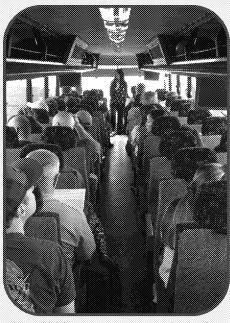
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COMMUNITY OUTREACH (continued)

Where can I get more information on the Navy's cleanup at HPNS? There are many ways to get more information on the Navy's cleanup at HPNS.

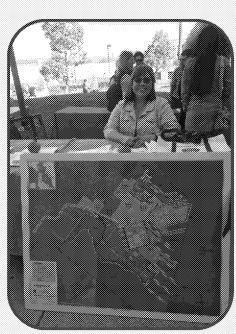
- Attend a Community Meeting or Bus Tour: The Navy presents updates at scheduled community meetings to inform people about cleanup at HPNS several times throughout the year, and bus tours are offered each spring and summer. For a list of upcoming meetings or bus tours, visit the Navy's website at www.bracpmo.navy.mil/hpns. You may also send an email to info@sfhpns.com or leave a message on the HPNS Info Line at (415) 295-4742 to receive more information.
- Join the HPNS distribution lists to receive electronic
 newsletters with meeting announcements, bus tour
 registration, program updates, document links, and other
 current information by sending a request to info@sfhpns.com.
- Visit the HPNS pages of the Navy's website at www.bracpmo.navy.mil/hpnsrc for program information, access to HPNS radiological program documents, and other related resources.
- Call Our Local Information Line at (415) 295-4742 for up-to-date information about outreach activities planned for the shipyard, including Navy meeting information and bus tour announcements and registration. A message may also be left with any questions or comments on the HPNS Cleanup Program. The HPNS Info Line supports three languages: English, Spanish and Cantonese.
- Call or visit the Navy's community resources to ask a question or request more information:
- Dr. Kathryn Higley, Community Technical Advisor: (541) 737-0675 or kathryn.higley@oregonstate.edu
- Mr. James Bryant, HPNS Community Liaison (415) 970-9051 or community@sfhpns.com



Navy BRAC program representative leads a guided bus tour of the cleanup sites at HPNS



Navy BRAC Environmental Coordinator gives a presentation at a local community group meeting



Radiological Community Technical Advisor answers auestions at a local event



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DATA EVALUATION AND CORRECTIVE ACTIONS

What did Tetra Tech EC (TtEC) do wrong and how will it be prevented from occurring again?

Data analysis indicated that some former TtEC personnel falsified radiological data samples. The Navy discovered this as part of its normal review procedures and will continue to conduct quality assurance checks on contractor work. For additional quality assurance, a third-party contractor has been hired to monitor proper collection and documentation of all future radiological soil samples. The Navy has completed evaluation of suspect data and is working with its regulatory team to take appropriate action.

How will the Navy determine if soil and building data has been falsified?

A team of experts has reviewed over 900,000 data results and data from building scans. Through statistical and logic tests, irregularities were identified and additional actions will be taken, including resampling. Irregularities are the result of many factors, one of which may be falsification.

What is the extent of the problem; how many areas will be resampled and buildings rescanned?

The data evaluation indicates wide-spread potential data falsification. Portions of Buildings 146, 439, 130, and 351A were re-surveyed in 2015 and a plan was developed to re-survey sections of Buildings 271 and 406 in 2016 with concurrence from federal and California state regulators. Building sections were re-surveyed as a quality control measure to verify that past work was performed adequately.

Results from the re-survey of Buildings 146, 439, 130, and 351A indicate that the measured radiological activity was below regulatory levels and presents no health concerns to the public or environment.

Low level radiological concentrations were detected as a result of the re-surveys of Buildings 271 and 406. These levels were between 0.001 millirem per year (mrem/y) and 0.087 mrem/y above background and present no health concerns to the public or environment. Additional sampling efforts are underway.

Is the Navy conducting groundwater or soil sampling?

Groundwater is being monitored by a separate contract and results do not indicate radiological contamination. The current data evaluation focuses on soil samples and building scans. The Navy plans to collect new, independent data to validate the site is safe.

Will the Navy fund an independent community technical advisor to validate the process and results?

A small group of firms with extensive radiological experience, capabilities, and expertise has been hired to perform a full review of past radiological work completed by TtEC. A third-party contractor has also been hired to evaluate that soil samples are collected and properly documented. To confirm the review findings, two national laboratories will provide independent review of all results and reports.

What is involved in the data evaluation process and how long will it take?

The process involves running statistical tests on all of the radiological data collected by TtEC, conducting a thorough review of reports, collecting verification sampling and resurveying, and reporting results. The data evaluation is expected to be complete as soon as possible, including database evaluation, surveys and sampling verification, and results reports.

Why did it take so long to start the data evaluation process? Where can I review the results?

Since the discovery of the fraudulent sampling activities, the Navy has consistently taken action in consultation with regulatory agencies to ensure the public's safety. Allegations from former TtEC employees prompted the Navy and regulatory agencies to conduct a thorough review of all radiological sites remediated by TtEC. This extensive review process will be completed as soon as possible.

The Navy will prepare a report with the results of the data evaluation and verification sampling. The report will be posted on the HPNS website at www.bracpmo.navy.mil/hpnsrc and will be available for the public to access. We anticipate a report on the initial findings during the spring of 2018.

Will the Navy be resampling the entire shipyard?

Based on our evaluation, over 2 million data points were reviewed. The Navy evaluation has identified the potential for falsification. As a result, additional investigation will occur. Areas that were not sampled by TtEC are not in question and, therefore, do not require evaluation or resampling.

Reference fact sheets may be found on the Navy's website at www.bracpmo.navy.mil/hpnsrc



Hunters Point Naval Shipyard (HPNS)



GENERAL SITE CLEANUP

Is the cleanup at Hunters Point Naval Shipyard complete?

Cleanup at HPNS is ongoing, based on a phased schedule by parcel. In December 2004, the Navy transferred the first 75 acres of HPNS (known as Parcel A) for redevelopment to the City of San Francisco, followed by Parcels D-2, UC-1, and UC-2 in 2015. The remaining parcels will be transferred to the City of San Francisco once environmental cleanup is complete and transfer of the property is approved. The current plan is to have all cleanup complete by 2024; however, additional environmental samples are being taken that may affect the Navy's current schedule.

What is the process for cleaning up radiological contamination?

The Navy follows an established procedure for cleaning up radiological contamination under CERCLA. The primary steps include investigation, remediation, and confirmation.

How is the public protected from dust caused by earth moving operations at the Shipyard?

Dust suppression measures are defined in the Navy's work plans, which are reviewed and approved by regulatory agencies. These measures include regular watering of surface soil to reduce dust, tire washing, covering of trucks transporting soil to landfills, and regular air quality monitoring both upwind and downwind from the location of earth moving operations.

How does the cleanup affect the health and safety of current and future Bayview residents?

The health and safety of community members is the Navy's priority during and after the environmental cleanup at HPNS. Compliance with federal, state, and local guidelines and regulatory requirements is required. The Navy meets conservative cleanup levels for sites, providing a high level of health protectiveness.

Should I be concerned about exposure to contaminated groundwater?

Radiological contamination has not been found in groundwater at HPNS; however, other contaminants have been identified and are being treated, as needed. Residents, tenants, workers, and the general public are not likely to come in contact with HPNS groundwater, as groundwater from HPNS is not used. The San Francisco Public Utilities Commission pumps drinkable water to the site and surrounding area for drinking, showering, and other uses.

How is the cleanup being overseen, by whom, and what are the safeguards in place?

The Navy is leading the cleanup of HPNS. The U.S. Environmental Protection Agency, the California Department of Toxic Substances Control, and the San Francisco Regional Water Quality Control Board ensure the Navy's compliance with federal site cleanup requirements. Federal law ensures that the cleanup protects human health and the environment.

Is the Navy taking the future possibility of sea level rise into consideration?

Yes, all Navy remedies at HPNS, including those proposed for the landfill, are designed to withstand potential sea level rise. The landfill remedy includes revetments (below and above-ground walls that prevent water and soil movement) and elevations to account for sea level rise.

Is the Navy taking the effects of an earthquake into consideration?

Yes, regulations require an evaluation of short- and long-term protectiveness for any solution proposed, including protectiveness during and after an earthquake. Geotechnical testing is performed at HPNS where contamination is being left in place and site conditions dictate. Final cleanup solutions are designed and constructed to withstand earthquakes.

How will the durable covers be maintained and monitored?

Once the final durable covers have been installed, the Navy will monitor and maintain them indefinitely, including: regular inspections of pavement conditions, cracks in building foundations, settlement, accumulation of surface water, the condition of survey benchmarks, and signs of vandalism. To ensure that the solution remains protective, Five Year Reviews will be conducted indefinitely.

Reference fact sheets may be found on the Navy's website at www.bracpmo.navy.mil/hpns

Annual Update of Cleanup Achievements (2017)

Dust Control During Cleanup (April 2016)

Parcel E-2 Landfill Fact Sheet (August 2017)

Radiological Cleanup Process (April 2015)

Installation of Durable Covers (March 2015)



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HEALTH AND SAFETY

Am I at risk from radiation exposure? What about my child or my grandparents?

Radiation is present naturally in the Earth's environment and we all experience some exposure on a daily basis regardless of location or lifestyle. The radiation exposures that the Navy is investigating are less than, or similar to, the amount of radiation received by the average person on an average day. Calculated limits at HPNS are protective of individuals of all ages and genders.

Is this project safe?

Yes, the Navy is committed to ensuring public safety. The Navy wants to make sure areas with potentially fraudulent radiological testing meet health protective standards; therefore, additional radiological sampling and testing are being conducted. The Navy will confirm that the entire property is safe before transferring it to the City of San Francisco.

How often is the air monitored and where can I see results from air monitoring stations?

For all active construction projects, air monitoring stations are placed both downwind and upwind of cleanup activities. Air monitoring stations collect data on dust and chemicals in the air. Soils are screened in the field for airborne contaminants. In addition to the samples collected by the Navy, regulatory agencies also collect on-site air samples as an additional verification step. Results from air monitoring stations may be found on the Navy's website and on California Department of Toxic Substances Control website.

Will soil excavation expose the community to radiological contamination?

Prior to soil excavations at HPNS, samples are collected at different depths to determine the levels of contaminated materials in soil and to determine soil handling procedures.

Where are you disposing of radiological waste found during cleanup?

California does not allow radiological waste to be disposed of within the state. Radiological waste from HPNS is typically shipped to Utah for disposal at a landfill specifically designed to safely hold radiological waste.

What type of safety measures are taken during radiological cleanup to ensure public safety?

The Navy implements several on-site controls and procedures at HPNS to ensure public safety. Examples include: (a) the establishment of radiologically controlled areas; (b) daily monitoring of air quality; and (c) implementation of the Basewide Dust Control Plan to contain contamination within radiologically controlled areas. In addition, regulatory agencies and the California Department of Public Health collect their own confirmation samples from radiological cleanup sites for independent verification and site workers follow health and safety plans specific to their tasks.

Who sets the radiation protection standards?

Radiation protection standards are established by many federal and state agencies, including the Nuclear Regulatory Commission, U.S. Environmental Protection Agency, and the California Department of Public Health. The Navy works with all of these agencies and others to ensure compliance with all radiation protection requirements. Dr. Kathryn Higley, the Navy's Community Technical Liaison can help answer your questions about radiation protection standards.

Are there resources for health testing of former workers? What about family members or neighbors?

Dr. Kathryn Higley is the Head of the School of Nuclear Science and Engineering at Oregon State University. As a Certified Health Physicist, she holds degrees in Radiological Health Sciences. The Navy has contracted with Dr. Higley to serve as a Community Technical Liaison to answer your radiological health and safety questions at (541) 737-7063 or kathryn.higley@oregonstate.edu. If you have immediate health concerns, please talk to your physician.

Reference fact sheets may be found on the Navy's website at www.bracpmo.navy.mil/hpnsrc

Understanding Radiation (February 2017)
Radiological Data Review Fact Sheet (February 2017)
Radiological Data Review Fact Sheet Update #2 (September 2017)
Radiological Data Fact Sheet Update #3 (January 2018)
Dust Control During Cleanup at HPNS (April 2016)
Air Monitoring at Parcel E-2 (July 2017)



Hunters Point Naval Shipyard (HPNS)
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REGULATORY OVERSIGHT AND INDEPENDENT REVIEW

What is the role of the Navy and regulatory agencies during the HPNS radiological data evaluation?

The Navy is the lead agency responsible for the investigation and cleanup of the Shipyard. The U.S. Environmental Protection Agency and its state regulatory agency partners (including the California Department of Toxic Substances Control [DTSC] and the California Department of Public Health [CDPH]) oversee Navy compliance with Superfund requirements to ensure cleanup at the Shipyard protects human health and the environment.

Have the regulatory agencies and the City of San Francisco agreed to the radiological data evaluation plan?

Yes. The Navy, regulatory agencies, and the City of San Francisco have been working together on the development of this plan and the subsequent implementation measures.

Who are the stakeholders that the Navy and regulatory agencies are working with?

The Navy is committed to keeping the public informed during the cleanup process at HPNS. Members of the public include, but are not limited to the following individuals and groups:

- homeowners, residents, and businesses on and immediately outside of the HPNS property line
- homeowners' and neighborhood associations in close proximity to HPNS
- residents and businesses in the neighboring communities
- other people who live and work in San Francisco
- local, city, and government officials
- community groups, activist and environmental groups

Where can I find information on dust monitoring and radiological scanning by DTSC Industrial Hygienists?

As a part of the regulatory oversight process, regulatory agencies periodically inspect cleanup activities and may take samples to confirm the effectiveness of Navy cleanup activities. To date, independent DTSC sampling results have confirmed the effectiveness of the Navy's dust control measures. The Navy and DTSC air monitoring reports are available on DTSC's Envirostor website under the Activities tab at

http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=38440005

How will the Navy check Tetra Tech EC's work? When and where can I see the results?

An independent team of technical experts are conducting an extensive evaluation of radiological data results through a set of statistical analyses and logic tests. Preliminary findings are complete and additional results are anticipated during the spring of 2018, including recommendations to address any questionable data that is identified. Findings and conclusion reports will be available on the Navy's website at www.bracpmo.navy.mil/hpnsrc.

Do we know if more anomalous soil samples have been identified after 2016?

The ongoing investigations by our team of technical experts include review of anomalous samples identified during the data evaluation process.

What is the role of contractors and independent experts during the HPNS radiological data evaluation?

A team of contractors with extensive expertise in radiological cleanup have been hired to conduct a thorough evaluation of soil sampling data collected by Tetra Tech EC to determine if the results are dependable, and a third-party contractor has been hired to monitor proper collection and documentation of soil samples. These firms currently include Battelle, Cabrera, CH2M, Oregon State University, Perma-Fix, and SC&A. In addition, the Oakridge National Laboratory and Argonne National Laboratory are conducting third-party-independent analysis of the data evaluation methods and findings for the HPNS radiological data review.

Has the Navy used a separate contractor to conduct impartial quality control for radiological work at HPNS?

Yes, a third-party contractor (Battelle) has been hired to monitor proper collection and documentation of radiological soil samples.

Reference fact sheets may be found on the Navy's website at www.bracpmo.navy.mil/hpnsrc

Radiological Data Review Fact Sheet (February 2017)

Radiological Data Review Fact Sheet Update #2 (September 2017)

Radiological Data Fact Sheet Update #3 (January 2018)

Air Monitoring at Parcel E-2 (July 2017)